



RAW SEQUENCE LISTING

DATE: 06/26/2002

PATENT APPLICATION: US/09/439,311B

TIME: 11:38:13

Input Set : A:\PTO.AMC.TXT

Output Set: N:\CRF3\06262002\I439311B.raw

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8 <110> APPLICANT: Guerry, Patricia
9      Trust, Trevor J
10     Burg, Edward
11     Lee, Lanfong
13 <120> TITLE OF INVENTION: A Recombinant Polypeptide for use in the Manufacture of
Vaccines
14     against Campylobacter Induced Diarrhea and to Reduce Colonization
16 <130> FILE REFERENCE: 78560
18 <140> CURRENT APPLICATION NUMBER: 09/439,311B
C--> 20 <141> CURRENT FILING DATE: 2001-12-18
22 <150> PRIOR APPLICATION NUMBER: US 60/108,114
24 <151> PRIOR FILING DATE: 1998-11-12
26 <160> NUMBER OF SEQ ID NOS: 6
28 <170> SOFTWARE: Apple Macintosh Microsoft Word 6.0
30 <210> SEQ ID NO: 1
31 <211> LENGTH: 999
32 <212> TYPE: DNA
33 <213> ORGANISM: Campylobacter coli
W--> 34 <220> FEATURE:
35 <223> OTHER INFORMATION:
W--> 36 <400> SEQUENCE: 1
37 attaacacaa atgttgacgc attaaatgct aaagcaaatt cggatctaaa cagcagagca 60
38 ttagatcaat cactttcaag actcagttca ggtcttagaa tcaactccgc agcagatgat 120
39 gcttcaggga tggcgatagc agatagttta agatctcagg caaatacttt gggtcaggct 180
40 atatctaatg gtaatgatgc tttaggatgc ttgcaaaactg cagataaggc tatggatgat 240
41 caacttaaaa tcttagatac catcaagact aaagcgactc aagctgctca agatgggtcaa 300
42 agcttaaaaa caagaactat gcttcaagca gacatcaacc gtttgatgga agaacttgat 360
43 aatatcgcaa ataccacttc atttaaatggc aaacaacttt taagtgggtgg ttttaccat 420
44 caagaattcc aaatcggttc aagttcaaact caaactatta aagcaagtat aggagcaact 480
45 cagtcttcta aaatcggtgt aacaagattt gaaacaggtt cacaagttt ttcttcaggc 540
46 actgtaggac ttactattaa aaactacaac ggtatcgaag attttaaatt tgatagtgt 600
47 gtgatttcta cttcagtagg aacaggtctt ggagctttgg ctgaagagat caacagaaat 660
48 gcagataaaa caggaattcg tgcaactttt gatgtaaaat ctgtaggagc ctatgcaata 720
49 aaagcaggaa atactttctca ggattttgct atcaatgggg ttgttatagg taagggtgat 780
50 tattcagatg gtgatgagaa tggttcttta atttcagcta tcaatgctgt aaaagataca 840
51 actgggtgtc aagcctctaa agatgaaaat ggtaaaacttg ttcttacttc ggccgatggt 900
52 agagggatta aaatcacagg tagcataggt gtaggagctg gtatattgca cactgaaaat 960
53 tatggaaggt tatctttagt taaaaatgat ggtagagat 999
56 <210> SEQ ID NO: 2
57 <211> LENGTH: 333
58 <212> TYPE: PRT
59 <213> ORGANISM: Campylobacter coli
W--> 60 <220> FEATURE:
61 <223> OTHER INFORMATION:

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W--> 62 <400> SEQUENCE: 2

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63 Ile Asn Thr Asn Val Ala Ala Leu Asn Ala Lys Ala Asn Ser Asp
64 1 5 10 15
65 Leu Asn Ser Arg Ala Leu Asp Gln Ser Leu Ser Arg Leu Ser Ser
66 20 25 30
67 Gly Leu Arg Ile Asn Ser Ala Ala Asp Asp Ala Ser Gly Met Ala
68 35 40 45
69 Ile Ala Asp Ser Leu Arg Ser Gln Ala Asn Thr Leu Gly Gln Ala
70 50 55 60
71 Ile Ser Asn Gly Asn Asp Ala Leu Gly Ile Leu Gln Thr Ala Asp
72 65 70 75
73 Lys Ala Met Asp Glu Gln Leu Lys Ile Leu Asp Thr Ile Lys Thr
74 80 85 90
75 Lys Ala Thr Gln Ala Ala Gln Asp Gly Gln Ser Leu Lys Thr Arg
76 95 100 105
77 Thr Met Leu Gln Ala Asp Ile Asn Arg Leu Met Glu Glu Leu Asp
78 110 115 120
79 Asn Ile Ala Asn Thr Thr Ser Phe Asn Gly Lys Gln Leu Leu Ser
80 125 130 135
81 Gly Gly Phe Thr Asn Gln Glu Phe Gln Ile Gly Ser Ser Ser Asn
82 140 145 150
83 Gln Thr Ile Lys Ala Ser Ile Gly Ala Thr Gln Ser Ser Lys Ile
84 155 160 165
85 Gly Val Thr Arg Phe Glu Thr Gly Ser Gln Ser Phe Ser Ser Gly
86 170 175 180
87 Thr Val Gly Leu Thr Ile Lys Asn Tyr Asn Gly Ile Glu Asp Phe
88 185 190 195
89 Lys Phe Asp Ser Val Val Ile Ser Thr Ser Val Gly Thr Gly Leu
90 200 205 210
91 Gly Ala Leu Ala Glu Glu Ile Asn Arg Asn Ala Asp Lys Thr Gly
92 215 220 225
93 Ile Arg Ala Thr Phe Asp Val Lys Ser Val Gly Ala Tyr Ala Ile
94 230 235 240
95 Lys Ala Gly Asn Thr Ser Gln Asp Phe Ala Ile Asn Gly Val Val
96 245 250 255
97 Ile Gly Lys Val Asp Tyr Ser Asp Gly Asp Glu Asn Gly Ser Leu
98 260 265 270
99 Ile Ser Ala Ile Asn Ala Val Lys Asp Thr Thr Gly Val Gln Ala
100 275 280 285
101 Ser Lys Asp Glu Asn Gly Lys Leu Val Leu Thr Ser Ala Asp Gly
102 290 295 300
103 Arg Gly Ile Lys Ile Thr Gly Ser Ile Gly Val Gly Ala Gly Ile
104 305 310 315
105 Leu His Thr Glu Asn Tyr Gly Arg Leu Ser Leu Val Lys Asn Asp
106 320 325 330
107 Gly Arg Asp
109 <210> SEQ ID NO: 3
111 <211> LENGTH: 27
112 <212> TYPE: DNA

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113 <213> ORGANISM: Campylobacter coli
W--> 114 <220> FEATURE:
115 <223> OTHER INFORMATION:
W--> 116 <400> SEQUENCE: 3
117 accaatatta acacaaatgt tgcagca 27
119 <210> SEQ ID NO: 4
121 <211> LENGTH: 33
122 <212> TYPE: DNA
123 <213> ORGANISM: Campylobacter coli
W--> 124 <220> FEATURE:
125 <223> OTHER INFORMATION:
W--> 126 <400> SEQUENCE: 4
127 ttatctagac taatctctac catcattttt aac 33
129 <210> SEQ ID NO: 5
131 <211> LENGTH: 574
132 <212> TYPE: PRT
133 <213> ORGANISM: Campylobacter jejuni 81-176
W--> 134 <220> FEATURE:
135 <223> OTHER INFORMATION:
W--> 136 <400> SEQUENCE: 5
137 Met Gly Phe Arg Ile Asn Thr Asn Val Ala Ala Leu Asn Ala Lys
138 1 5 10 15
139 Ala Asn Ser Asp Leu Asn Ser Arg Ala Leu Asp Gln Ser Leu Ser
140 20 25 30
141 Arg Leu Ser Ser Gly Leu Arg Ile Asn Ser Ala Ala Asp Asp Ala
142 35 40 45
143 Ser Gly Met Ala Ile Ala Asp Ser Leu Arg Ser Gln Ala Asn Thr
144 50 55 60
145 Leu Gly Gln Ala Ile Ser Asn Gly Asn Asp Ala Leu Gly Ile Leu
146 65 70 75
147 Gln Thr Ala Asp Lys Ala Met Asp Glu Gln Leu Lys Ile Leu Asp
148 80 85 90
149 Thr Ile Lys Thr Lys Ala Thr Gln Ala Ala Gln Asp Gly Gln Ser
150 95 100 105
151 Leu Lys Thr Arg Thr Met Leu Gln Ala Asp Ile Asn Arg Leu Met
152 110 115 120
153 Glu Glu Leu Asp Asn Ile Ala Asn Thr Thr Ser Phe Asn Gly Lys
154 125 130 135
155 Gln Leu Leu Ser Gly Gly Phe Thr Asn Gln Glu Phe Gln Ile Gly
156 140 145 150
157 Ser Ser Ser Asn Gln Thr Ile Lys Ala Ser Ile Gly Ala Thr Gln
158 155 160 165
159 Ser Ser Lys Ile Gly Val Thr Arg Phe Glu Thr Gly Ser Gln Ser
160 170 175 180
161 Phe Ser Ser Gly Thr Val Gly Leu Thr Ile Lys Asn Tyr Asn Gly
162 185 190 195
163 Ile Glu Asp Phe Lys Phe Asp Ser Val Val Ile Ser Thr Ser Val
164 200 205 210
165 Gly Thr Gly Leu Gly Ala Leu Ala Glu Glu Ile Asn Arg Asn Ala

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166		215		220		225
167	Asp Lys Thr Gly	Ile Arg Ala Thr Phe	Asp Val Lys Ser Val	Gly		
168		230		235		240
169	Ala Tyr Ala Ile	Lys Ala Gly Asn Thr	Ser Gln Asp Phe Ala	Ile		
170		245		250		255
171	Asn Gly Val Val	Ile Gly Gln Ile Asn	Tyr Asn Asp Gly Asp	Asn		
172		260		265		270
173	Asn Gly Gln Leu	Ile Ser Ala Ile Asn	Ala Val Lys Asp Thr	Thr		
174		275		280		285
175	Gly Val Gln Ala	Ser Lys Asp Glu Asn	Gly Lys Leu Val Leu	Thr		
176		290		295		300
177	Ser Ala Asp Gly	Arg Gly Ile Lys Ile	Thr Gly Ser Ile Gly	Val		
178		305		310		315
179	Gly Ala Gly Ile	Leu His Thr Glu Asn	Tyr Gly Arg Leu Ser	Leu		
180		320		325		330
181	Val Lys Asn Asp	Gly Arg Asp Ile Asn	Ile Ser Gly Thr Gly	Leu		
182		335		340		345
183	Ser Ala Ile Gly	Met Gly Ala Thr Asp	Met Ile Ser Gln Ser	Ser		
184		350		355		360
185	Val Ser Leu Arg	Glu Ser Lys Gly Gln	Ile Ser Ala Ala Asn	Ala		
186		365		370		375
187	Asp Ala Met Gly	Phe Asn Ser Tyr Lys	Gly gly Gly Lys Phe	Val		
188		380		385		390
189	Phe Thr Gln Asn	Val Ser Ser Ile Ser	Ala Phe Met Ser Ala	Gln		
190		395		400		405
191	Gly Ser Gly Phe	Ser Arg Gly Ser Gly	Phe Ser Val Gly Ser	Gly		
192		410		415		420
193	Lys Asn Leu Ser	Val Gly Leu Ser Gln	Gly Ile Gln Ile Ile	Ser		
194		425		430		435
195	Ser Ala Ala Ser	Met Ser Asn Thr Tyr	Val Val Ser Ala Gly	Ser		
196		440		445		450
197	Gly Phe Ser Ser	Gly Ser Gly Asn Ser	Gln Phe Ala Ala Leu	Lys		
198		455		460		465
199	Thr Thr Ala Ala	Asn Thr Thr Asp Glu	Thr Ala gly Val Thr	Thr		
200		470		475		480
201	Leu Lys Gly Ala	Met Ala Val Met Asp	Ile Ala Glu Thr Ala	Ile		
202		485		490		495
203	Thr Asn Leu Asp	Gln Ile Arg Ala Asp	Ile Gly Ser Ile Gln	Asn		
204		500		505		510
205	Gln Val Thr Ser	Thr Ile Asn Asn Ile	Thr Val Thr Gln Val	Asn		
206		515		520		525
207	Val Lys Ala Ala	Glu Ser Gln Ile Arg	Asp Val Asp Phe Ala	Ser		
208		530		535		540
209	Glu Ser Ala Asn	Tyr Ser Lys Ala Asn	Ile Leu Ala Gln Ser	Gly		
210		545		550		555
211	Ser Tyr Ala Met	Ala Gln Ala Asn Ser	Ser Gln Gln Asn Val	Leu		
212		560		565		570
213	Arg Leu Leu Gln					
215	<210> SEQ ID NO: 6					

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217 <211> LENGTH: 573
218 <212> TYPE: PRT
219 <213> ORGANISM: Campylobacter coli VC167 T2
W--> 220 <220> FEATURE:
221 <223> OTHER INFORMATION:
W--> 222 <400> SEQUENCE: 6
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224 1 5 10 15
225 Ala Asn Ser Asp Leu Asn Ser Arg Ala Leu Asp Gln Ser Leu Ser
226 20 25 30
227 Arg Leu Ser Ser Gly Leu Arg Ile Asn Ser Ala Ala Asp Asp Ala
228 35 40 45
229 Ser Gly Met Ala Ile Ala Asp Ser Leu Arg Ser Gln Ala Asn Thr
230 50 55 60
231 Leu Gly Gln Ala Ile Ser Asn Gly Asn Asp Ala Leu Gly Ile Leu
232 65 70 75
233 Gln Thr Ala Asp Lys Ala Met Asp Glu Gln Leu Lys Ile Leu Asp
234 80 85 90
235 Thr Ile Lys Thr Lys Ala Thr Gln Ala Ala Gln Asp Gly Gln Ser
236 95 100 105
237 Leu Lys Thr Arg Thr Met Leu Gln Ala Asp Ile Asn Arg Leu Met
238 110 115 120
239 Glu Glu Leu Asp Asn Ile Ala Asn Thr Thr Ser Phe Asn Gly Lys
240 125 130 135
241 Gln Leu Leu Ser Gly Gly Phe Thr Asn Gln Glu Phe Gln Ile Gly
242 140 145 150
243 Ser Ser Ser Asn Gln Thr Ile Lys Ala Ser Ile Gly Ala Thr Gln
244 155 160 165
245 Ser Ser Lys Ile Gly Val Thr Arg Phe Glu Thr Gly Ser Gln Ser
246 170 175 180
247 Phe Ser Ser Gly Thr Val Gly Leu Thr Ile Lys Asn Tyr Asn Gly
248 185 190 195
249 Ile Glu Asp Phe Lys Phe Gln Ser Val Val Ile Ser Thr Ser Val
250 200 205 210
251 Gly Thr Gly Leu Gly Ala Leu Ala Glu Glu Ile Asn Arg Asn Ala
252 215 220 225
253 Asp Lys Thr Gly Ile Arg Ala Thr Phe Asp Val Lys Ser Val Gly
254 230 235 240
255 Ala Tyr Ala Ile Lys Ala Gly Asn Thr Ser Gln Asp Phe Ala Ile
256 245 250 255
257 Asn Gly Val Val Ile Gly Lys Val Asp Tyr Ser Asp Gly Asp Glu
258 260 265 270
259 Asn Gly Ser Leu Ile Ser Ala Ile Asn Ala Val Lys Asp Thr Thr
260 275 280 285
261 Gly Val Gln Ala Ser Lys Asp Glu Asn Gly Lys Leu Val Leu Thr
262 290 295 300
263 Ser Ala Asp Gly Arg Gly Ile Lys Ile Thr Gly Ser Ile Gly Val
264 305 310 315
265 Gly Ala Gly Ile Leu His Thr Glu Asn Tyr Gly Arg Leu Ser Leu

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VERIFICATION SUMMARY

DATE: 06/26/2002

PATENT APPLICATION: US/09/439,311B

TIME: 11:38:14

Input Set : A:\PTO.AMC.TXT

Output Set: N:\CRF3\06262002\I439311B.raw

L:20 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:34 M:283 W: Missing Blank Line separator, <220> field identifier
L:36 M:283 W: Missing Blank Line separator, <400> field identifier
L:60 M:283 W: Missing Blank Line separator, <220> field identifier
L:62 M:283 W: Missing Blank Line separator, <400> field identifier
L:114 M:283 W: Missing Blank Line separator, <220> field identifier
L:116 M:283 W: Missing Blank Line separator, <400> field identifier
L:124 M:283 W: Missing Blank Line separator, <220> field identifier
L:126 M:283 W: Missing Blank Line separator, <400> field identifier
L:134 M:283 W: Missing Blank Line separator, <220> field identifier
L:136 M:283 W: Missing Blank Line separator, <400> field identifier
L:220 M:283 W: Missing Blank Line separator, <220> field identifier
L:222 M:283 W: Missing Blank Line separator, <400> field identifier